

## Supplementary Information

**Table S1.** *Lactobacillaceae*-affiliated OTUs in female mice of 5 weeks of age in MRL and MRL/lpr strains.

**Table S2.** *Lachnospiraceae*-affiliated OTUs in female mice of 5 weeks of age in MRL and MRL/lpr strains.

**Table S3.** Raw data used for correlation analysis shown in Fig. 3C.

**Figure S1.** Taxonomy assignments for low-abundance OTUs in 5-week-old, female MRL and MRL/lpr mice. Low-abundance was defined as OTUs making up less than 0.1% of all six samples. RF9 is a family within Mollicutes class within the Tenericutes phylum. Significance of difference between the two mouse strains was determined by unpaired *t*-test assuming unequal variance. \* $P<0.05$ ; \*\*\* $P<0.001$ .

**Figure S2.** Gender-specific differences in microbial community composition and diversity. (A) Bacterial taxa for abundant OTUs ( $>0.1\%$ ) in 14-week-old mice. (B) Rare OTUs ( $<0.1\%$ ) taxonomy assignments. Statistical significance was determined by two-way ANOVA followed by pairwise *t*-test with TukeyHSD-adjusted significance. \* $P<0.05$  comparing female versus male MRL mice. (C) Principal coordinate analysis of the effect of genders and strains on microbial communities. (D) Microbial community richness measured as phylogenetic diversity (PD) and Shannon's entropy.

**Figure S3.** Effect of vitamin A treatments on gut microbiota. (A) Principal coordinate analysis of the effect of RA and VARA on microbial communities. (B) Community richness analysis. PD: phylogenetic diversity.

**Table S1.**

# Constructed from biom file	MRL	MRL	MRL	MRL/lpr	MRL/lpr	MRL/lpr	
#OTU ID	71	70	69	84	86	85	taxonomy
New.CleanUp.ReferenceOTU16796	10	2	3	0	1	0	Lactobacillus; Lactobacillus_odoratitofui
851886	329	420	220	896	136	117	Lactobacillus; Lactobacillus_iris
New.CleanUp.ReferenceOTU39392	1	4	0	4	0	0	Lactobacillus; Lactobacillus_iris
949863	3	1	1	6	1	2	Lactobacillus; Lactobacillus_iris
578794	2	1	2	3	1	1	Lactobacillus; Lactobacillus_iris
New.CleanUp.ReferenceOTU45047	1	1	2	6	0	2	Lactobacillus; Lactobacillus_iris
254011	0	0	2	4	0	0	Lactobacillus; Lactobacillus_iris
New.ReferenceOTU233	0	2	0	0	0	0	Lactobacillus; Lactobacillus_pontis
New.CleanUp.ReferenceOTU11058	8	4	10	0	0	5	Lactobacillus; Lactobacillus_salivarius
New.CleanUp.ReferenceOTU7196	7	0	6	0	2	3	Lactobacillus; Lactobacillus_sp_KC45a
590168	127	82	170	0	12	15	Lactobacillus; Lactobacillus_sp_KC45b
New.ReferenceOTU174	79	34	80	0	22	13	Lactobacillus; Lactobacillus_sp_KC45b
563625	3	1	1	5	0	0	Lactobacillus; Lactobacillus_vaginalis
1055714	2385	3601	2758	1331	178	143	Lactobacillus; uncultured_bacterium
1107027	1339	311	1074	0	3589	2878	Lactobacillus; uncultured_bacterium
318764	563	267	650	0	133	133	Lactobacillus; uncultured_bacterium
864573	182	232	182	88	7	9	Lactobacillus; uncultured_bacterium
New.ReferenceOTU144	272	159	303	2	52	41	Lactobacillus; uncultured_bacterium
306306	36	102	63	34	2	7	Lactobacillus; uncultured_bacterium
128227	118	100	164	16	22	12	Lactobacillus; uncultured_bacterium
760273	62	91	62	124	24	21	Lactobacillus; uncultured_bacterium
4388035	194	71	256	0	59	51	Lactobacillus; uncultured_bacterium
New.ReferenceOTU173	53	47	64	0	0	0	Lactobacillus; uncultured_bacterium
New.ReferenceOTU140	58	29	46	0	52	62	Lactobacillus; uncultured_bacterium
New.ReferenceOTU139	38	24	29	0	17	7	Lactobacillus; uncultured_bacterium
312272	17	19	11	0	1	2	Lactobacillus; uncultured_bacterium
435897	69	19	77	0	82	65	Lactobacillus; uncultured_bacterium
182764	6	18	14	55	2	5	Lactobacillus; uncultured_bacterium
773251	38	16	43	0	38	26	Lactobacillus; uncultured_bacterium
813944	19	16	14	7	1	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU16264	16	16	9	6	0	0	Lactobacillus; uncultured_bacterium
New.ReferenceOTU254	13	15	14	9	13	14	Lactobacillus; uncultured_bacterium
682888	13	14	12	3	0	1	Lactobacillus; uncultured_bacterium
15129	5	13	2	2	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU38031	3	11	9	3	3	2	Lactobacillus; uncultured_bacterium
New.ReferenceOTU154	6	9	14	0	21	37	Lactobacillus; uncultured_bacterium
307193	3	8	1	3	0	0	Lactobacillus; uncultured_bacterium
318320	6	7	2	3	0	0	Lactobacillus; uncultured_bacterium
137042	2	6	4	3	0	1	Lactobacillus; uncultured_bacterium
New.ReferenceOTU226	6	6	4	3	0	0	Lactobacillus; uncultured_bacterium
634900	1	5	1	1	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU5528	0	4	0	1	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU17615	4	4	4	3	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU32630	0	4	4	9	2	2	Lactobacillus; uncultured_bacterium
266415	6	3	2	3	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU9653	7	3	5	8	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU25773	3	3	4	0	3	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU35279	5	3	3	0	1	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU37079	0	3	0	0	0	0	Lactobacillus; uncultured_bacterium
327414	4	2	3	3	3	3	Lactobacillus; uncultured_bacterium
817146	4	2	3	0	8	23	Lactobacillus; uncultured_bacterium
296942	21	2	19	0	103	143	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU21240	5	2	3	0	1	1	Lactobacillus; uncultured_bacterium
577132	8	1	5	0	6	6	Lactobacillus; uncultured_bacterium
269125	1	1	2	0	1	1	Lactobacillus; uncultured_bacterium
354971	2	1	1	2	0	2	Lactobacillus; uncultured_bacterium
303889	4	1	4	0	25	31	Lactobacillus; uncultured_bacterium
271867	1	1	1	0	1	1	Lactobacillus; uncultured_bacterium
New.ReferenceOTU75	3	1	0	0	5	14	Lactobacillus; uncultured_bacterium
New.ReferenceOTU236	2	1	1	0	0	0	Lactobacillus; uncultured_bacterium
New.ReferenceOTU120	2	1	1	0	1	0	Lactobacillus; uncultured_bacterium
New.ReferenceOTU157	0	1	1	0	1	0	Lactobacillus; uncultured_bacterium
New.ReferenceOTU166	5	1	5	0	7	21	Lactobacillus; uncultured_bacterium
New.ReferenceOTU176	2	1	8	0	24	8	Lactobacillus; uncultured_bacterium
New.ReferenceOTU191	1	1	1	0	3	5	Lactobacillus; uncultured_bacterium
New.ReferenceOTU215	0	1	1	0	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU11890	0	1	0	6	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU37032	0	1	1	0	1	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU44967	0	1	0	2	0	0	Lactobacillus; uncultured_bacterium
274016	0	0	0	0	2	5	Lactobacillus; uncultured_bacterium
426769	1	0	0	0	3	0	Lactobacillus; uncultured_bacterium
135956	3	0	1	0	7	10	Lactobacillus; uncultured_bacterium
567604	1	0	6	0	0	1	Lactobacillus; uncultured_bacterium
271784	2	0	0	0	5	4	Lactobacillus; uncultured_bacterium
133892	4	0	0	0	4	3	Lactobacillus; uncultured_bacterium
751643	1	0	1	0	5	3	Lactobacillus; uncultured_bacterium
392417	1	0	3	0	2	10	Lactobacillus; uncultured_bacterium
New.ReferenceOTU229	2	0	5	0	1	7	Lactobacillus; uncultured_bacterium
New.ReferenceOTU265	3	0	1	0	9	4	Lactobacillus; uncultured_bacterium
New.ReferenceOTU170	0	0	1	3	0	0	Lactobacillus; uncultured_bacterium
New.ReferenceOTU87	0	0	2	0	4	4	Lactobacillus; uncultured_bacterium
New.ReferenceOTU190	0	0	0	0	34	29	Lactobacillus; uncultured_bacterium
New.ReferenceOTU42	0	0	0	0	13	9	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU862	1	0	0	0	1	7	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU1072	0	0	0	1	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU4061	0	0	1	0	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU4903	1	0	0	0	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU9738	2	0	0	0	3	2	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU13239	0	0	0	13	1	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU14374	0	0	0	0	1	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU14784	0	0	0	0	1	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU19489	1	0	0	0	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU19528	1	0	1	0	1	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU23138	0	0	0	47	1	2	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU25191	0	0	0	8	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU26698	0	0	2	0	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU31848	0	0	1	0	4	2	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU33687	0	0	3	2	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU38531	3	0	0	0	0	1	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU40991	0	0	5	0	5	5	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU41201	0	0	0	0	1	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU41586	0	0	0	1	0	0	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU42562	5	0	6	0	4	3	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU44585	3	0	0	0	5	5	Lactobacillus; uncultured_bacterium
New.CleanUp.ReferenceOTU11205	0	0	0	6	1	0	Lactobacillus; uncultured_compost_bacterium

Table S2.

ID	MRL	MRL	MRL	MRL/Ipr	MRL/Ipr	MRL/Ipr	
145 OTUs	71	70	69	84	86	85	taxonomy
1105328	0	1	0	0	1	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Coprococcus; uncultured bacterium
717509	5	3	7	10	4	11	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Coprococcus; uncultured bacterium
194662	0	1	0	2	6	9	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
1110862	0	1	0	1	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
586030	4	7	8	5	9	19	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
575122	0	0	1	0	1	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
846244	5	2	1	18	11	42	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
565357	2	0	2	1	13	25	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
198061	1	5	3	7	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
1111191	1	9	6	3	10	9	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
354634	10	5	9	15	7	4	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
653533	3	2	2	18	11	12	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
448395	1	0	0	0	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
New.ReferenceOTU49	1	0	2	0	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
New.CleanUp.ReferenceOTU7755	0	0	0	0	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
New.CleanUp.ReferenceOTU15946	0	0	0	0	4	2	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Incertae_Sedis; uncultured bacterium
342786	0	0	0	11	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Marvinbryantia; uncultured bacterium
768294	0	0	0	41	1	3	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
428255	1	3	0	6	68	320	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
349864	3	1	5	72	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
531695	0	0	0	0	1	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
170248	0	23	0	0	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
344726	2	1	3	4	2	3	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
272080	0	8	0	16	5	10	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
New.CleanUp.ReferenceOTU17942	0	0	0	0	6	16	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured bacterium
468313	27	83	78	1	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Roseburia; uncultured organism
833816	0	0	0	17	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
309054	0	2	0	2	5	4	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
355850	0	0	0	0	27	22	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
277329	0	0	0	1	1	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
617506	0	0	3	10	4	8	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
459276	1	3	2	4	1	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
346764	5	10	10	15	5	18	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
312145	1	0	0	0	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
271706	0	0	0	0	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
273705	0	0	0	2	4	6	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
354501	0	0	0	10	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
356012	0	0	0	23	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
393512	0	5	1	3	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
388574	0	0	0	0	1	3	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
1108453	1	6	0	9	0	7	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
336276	0	8	0	0	8	3	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
685934	0	0	2	0	1	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
641654	8	18	9	60	5	7	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
350790	2	0	2	1	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
309534	0	0	0	0	6	12	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
330921	3	2	7	6	14	7	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
466409	0	2	0	6	1	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
272949	0	1	0	0	18	68	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
372900	2	0	0	0	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
827743	40	107	55	0	173	296	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
276808	0	0	0	3	4	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
353820	6	1	1	8	11	10	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
708101	1	1	0	0	13	7	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
552586	1	1	0	63	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
743396	0	0	0	3	0	5	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
173342	0	0	1	0	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
276348	0	2	0	267	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
351545	0	4	7	6	24	43	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
349074	0	0	0	0	2	4	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
407782	0	0	0	1	4	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
356455	0	1	1	0	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
192878	2	0	0	2	1	3	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
382220	0	8	2	2	31	63	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
444987	0	0	0	0	0	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
327284	1	5	2	34	23	81	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
196749	0	1	0	0	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
1104569	2	8	6	8	8	8	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
1076587	0	0	0	3	0	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
275678	0	0	1	0	3	12	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
261744	0	0	0	0	2	1	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
1110135	1	1	0	0	1	0	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium
351859	0	0	2	14	1	2	Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; uncultured; uncultured bacterium



**Table S3.**

SampleID	Group	Lactobacillaceae	Lachnospiraceae	Spleen_weight	MLN_weight	Renal_Function
37	Vehicle	0.191530612	0.131020408	0.286	1.879	1
38	Vehicle	0.175	0.084795918	0.309	0.937	6
39	Vehicle	0.174795918	0.147244898	0.486	2.354	4.6
42	Vehicle	0.183061224	0.116428571	0.344	1.997	3.4
44	RA	0.526020408	0.062244898	0.341	0.941	1.2
45	RA	0.317040816	0.057755102	0.418	0.831	1
47	VARA	0.199489796	0.306020408	0.469	0.763	2
48	VARA	0.157142857	0.402755102	0.322	0.59	1.6
54	RA	0.415	0.069285714	0.303	0.417	1.2
55	RA	0.304183673	0.14377551	0.28	0.763	1
57	VARA	0.105816327	0.405918367	0.762	2.02	1.4
58	VARA	0.247142857	0.224081633	0.287	0.894	4.2
64	HC	0.412653061	0.018163265	0.092	0.034	1
66	HC	0.276122449	0.014693878	0.142	0.031	1
67	HC	0.370102041	0.063979592	0.098	0.02	1.4
68	HC	0.339795918	0.005816327	0.104	0.015	1

Fig.S1

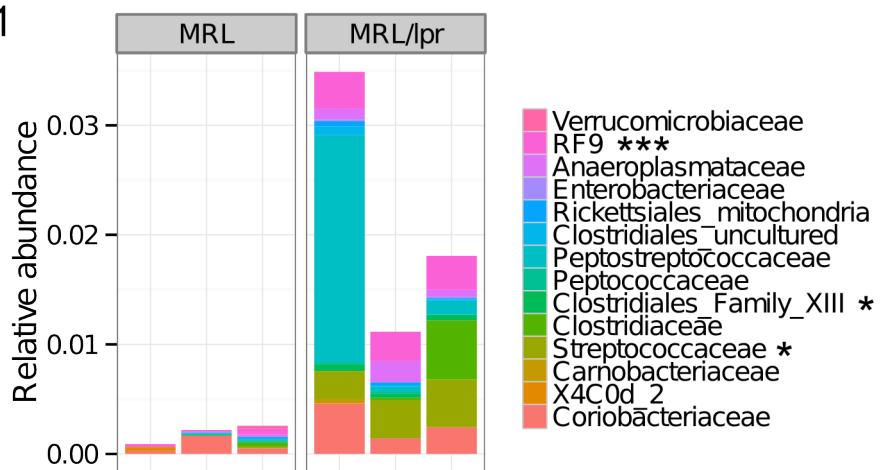


Fig.S2A

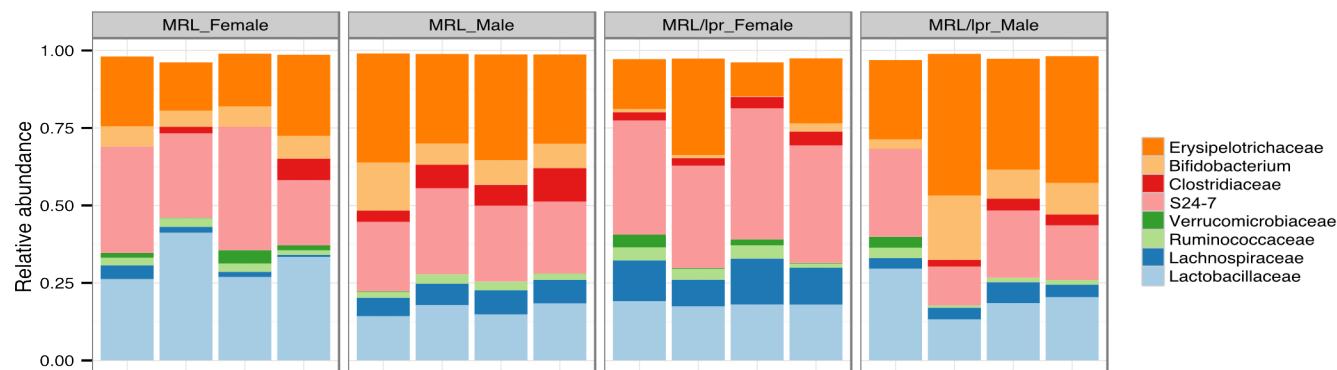


Fig.S2B

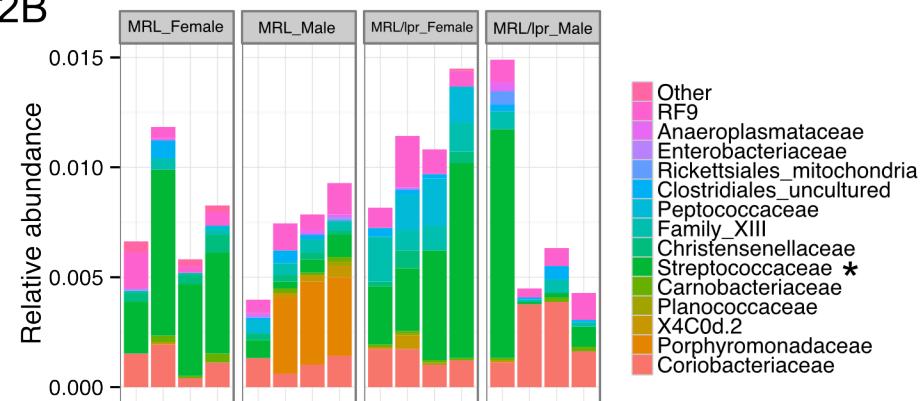


Fig.S2C

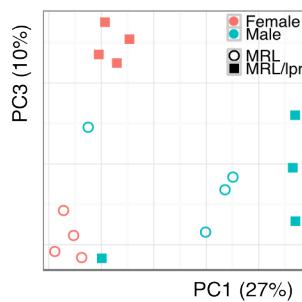


Fig.S2D

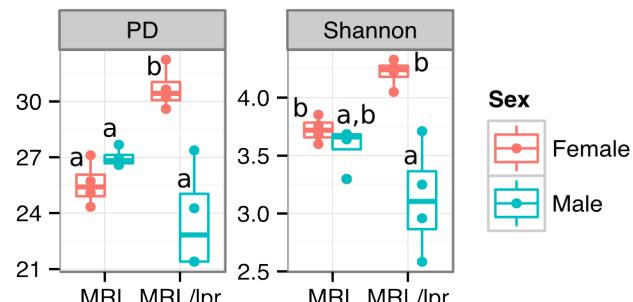


Fig.S3A

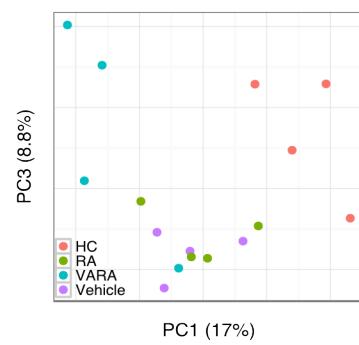


Fig.S3B

